GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO-1971
ANSWERED ON 11/02/2026

DEPLOYMENT OF ANEEL

1971. DR. K SUDHAKAR

Will the PRIME MINISTER be pleased to state:-

(a) the current status of the collaboration between National Thermal Power Corporation (NTPC) Limited and Clean Core Thorium Energy (CCTE) regarding the evaluation and potential deployment of Advanced Nuclear Energy for Enriched Life (ANEEL) fuel in country's nuclear power plants;

(b) the details of anticipated technical and economic benefits of integrating ANEEL fuel into the existing fleet of Pressurised Heavy Water Reactors (PHWRs), particularly in terms of fuel efficiency and waste reduction;

(c) the manner in which this international collaboration complements the long-term objectives of the Three-Stage Nuclear Power Programme and the goal of achieving 100 GW of nuclear capacity by 2047;

(d) the details of the institutional and regulatory safeguards in place to ensure that collaborations with foreign entities remain consistent with national security and data protection protocols; and

(e) the details of steps taken/being taken by the Government under the SHANTI Act, 2025 to facilitate such advanced technology partnerships?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH)

(a) As per joint press release by NTPC and CCTE, they are exploring development and deployment of ANEEL, a Thorium based fuel for PHWR reactors, in India subject to approval from respective governments in line with prevailing national laws.

(b) The natural Uranium Oxide based fuel will continue to be deployed in our current fleet of PHWRs, representing an optimised and efficient utilisation of our limited Uranium resources in a sustained manner through the 3-stage program. With regard to waste, India is following a closed fuel cycle where the spent fuel is reprocessed to recover valuable fissile material for use in our second stage of nuclear program.

(c) India has a well-articulated 3 stage program that allows optimal utilization of our limited Uranium resources for attaining long term energy security through deployment of Thorium in a self-sustaining 3rd stage supported by a second stage involving Fast Breeder Reactors.

(d) All the collaborations in the field of nuclear energy will be consistent with the provisions of the SHANTI Act. The Atomic Energy Regulatory Board has a robust framework of regulatory oversight of nuclear facilities and has now been accorded statutory status with the passing of the SHANTI Act.

(e) Allowing private sector participation and undertaking all the steps to facilitate such advanced technology partnerships in line with the provisions of the SHANTI Act.

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